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- McCUMBEE, W. D., K. S. McCARTY, JR., AND H. E. LeBOVITZ: Hormone Responsiveness of a Transplantable Rat Chondrosarcoma. II. Evidence for *in Vivo* Hormone Dependence 1930
- SOLANO, A. R., A. GARCIA-VELA, K. J. CATT, AND M. L. Dufau: Modulation of Serum and Pituitary Luteinizing Hormone Bioactivity by Androgen in the Rat 1941
- BEAMER, W. G., M. C. WILSON, AND H. F. DeLUCA: Successful Treatment of Genetically Hypophosphatemic Mice by 1α -Hydroxyvitamin D_3 but Not 1,25-Dihydroxyvitamin D_3 1949
- YOSHIDA, H., AND C. B. HUGGINS: Induction of Ossification in the Clitoris of Neonatal Female Rats by Administration of Androgens 1956
- FINIDORI, J., M. C. POSTEL-VINAY, AND C. KLEINKNECHT: Lactogenic and Somatotropic Binding Sites in Liver Membranes of Rats with Renal Insufficiency 1960
- WATKINS, W. B., R. Y. MOORE, D. BURTON, H. G. BONE III, B. D. CATHERWOOD, AND L. J. DEFTOS: Distribution of Immunoreactive Calcitonin in the Rat Pituitary Gland 1966
- ROSENFELD, C. R., R. J. WORLEY, L. MILEWICH, N. F. GRANT, JR., AND C. R. PARKER, JR.: Ovine Fetal-Placental Sulfoconjugation and Aromatization of Dehydroepiandrosterone 1971
- BARNEA, A., G. CHO, AND J. C. PORTER: Effect of Aging on the Subneuronal Distribution of Luteinizing Hormone-Releasing Hormone in the Hypothalamus 1980
- RAMALEY, J. A., AND C. K. PHARES: Delay of Puberty Onset in Females due to Suppression of Growth Hormone 1989
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- ATKISON, P. R., E. R. WEIDMAN, B. BHAUMICK, AND R. M. BALA: Release of Somatomedin-Like Activity by Cultured WI-38 Human Fibroblasts 2006
- HERRMANN-ERLEE, M. P. M., J. M. VAN DER MEER, AND J. W. HEKKELMAN: *In Vitro* Studies on the Adenosine 3',5'-Monophosphate (cAMP) Response of Embryonic Rat Calvaria to Bovine Parathyroid Hormone-(1-84) [bPTH-(1-84)], bPTH-(1-34), and bPTH-(3-34) and the Loss of cAMP Responsiveness after Prolonged Incubation 2013

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